



## **Southeast Fire Ecology Partnership**

The Southeast Fire Ecology Partnership (SEFEP) is an innovative new group comprising regional fire ecologists from the NPS, USFS, and FWS with staff from The Nature Conservancy Global Fire Initiative and the Tall Timbers Research Station. The partnership's mission is to serve as a reference point for fire ecology issues and to support collaborative research, training, and education efforts within the field of fire ecology, especially in the southeastern United States.

The SEFEP was formed in 2003 and is based at Tall Timbers Research Station. One of the first partnerships of its kind, the group is similar to the California Association of Fire Ecologists (CAFE). This group differs from CAFE, though; SEFEP members are colocated, interact more frequently, and operate under a formal charter.

During 2004 the SEFEP initiated many collaborative projects and activities supporting National Fire Plan goals of restoring fire-adapted ecosystems and reducing hazardous fuels. One of the first tasks was Fire Regime Condition Class (FRCC) reference condition development for the Southeast, and the group's working with the national FRCC team and the LANFIRE team on this effort. DOI agencies have been directed to assign FRCC information to all proposed fuels treatments as part of their NFPORS entries. Defining historic reference conditions, especially in Southeastern landscapes, can be problematic. To ensure consistency, the SEFEP is taking the lead in the development and compilation of information on reference landscape conditions for the Southeastern states.

In February 2004 the partnership hosted the first of two reference condition development workshops attended by 20 regional experts in the field of fire ecology, including representatives from the federal government, academic institutions, The Nature Conservancy, and state natural heritage programs. This group was tasked with defining and developing ecological models for the major vegetation types of the Southeast. They met again in June to share results and to initiate a peer review process. As of November, 90 vegetation communities were identified and approximately 30 draft models and reference conditions were developed; they're available at [www.frcc.gov/reference.html](http://www.frcc.gov/reference.html) and additional model development and peer review will occur in the coming year during workshops related to the FRCC and LANFIRE projects.

The coordination of these workshops by SEFEP is worthy of recognition from at least two perspectives. First, this project solidified the newly formed partnership and epitomized collaboration and communication among diverse parties in the complex field of fire ecology. Second, this project fulfills a critical need in application of the FRCC classification system, which has been recognized by federal agencies and Congress as a primary mechanism for evaluating and quantifying forest health and for planning and prioritizing restoration of fire-adapted ecosystems.

Another major accomplishment of SEFEP in 2004 was the submission and acceptance of a JFSP research proposal to quantify litter and duff bulk density values for Southeast vegetation community types. These values are necessary constants in equations used to quantify fuel loadings. In the past, inconsistent estimates of these constants were used, or surrogate Western species constants were applied to calculate fuel loadings for litter and duff – which were subsequently used to evaluate treatment effectiveness in reducing hazardous fuels. These inconsistencies reduced confidence in estimates of fuel loading or fuel load changes as a result of various treatments. SEFEP members collaboratively identified this as a high priority research need throughout the region, and worked with the principal investigator to select

sampling sites throughout the region. Publication of these constant bulk density values will help produce consistent measurements of fuel loading and evaluation of treatment effectiveness throughout the region. Comparison of values across geographic areas will also be possible. In 2004 SEFEP also established a formal charter, mission, vision, and a website at [www.ttrs.org/sefep](http://www.ttrs.org/sefep), including an email help desk. A traveling poster presentation was also developed, and the group also participated in local and regional educational, training, and outreach projects.



SEFEP members Bruce Davenport (USFS) and Ron Masters (Tall Timbers Research Station) discuss restoration of native groundcover in Longleaf Pine ecosystems with Wendel Hann (USFS FRCC lead) and Sharon Hermann (Auburn University).



Participants in the Southeast Region Fire Regime Condition Class reference conditions workshop visit a research site on Tall Timbers property demonstrating a pine stand maintained by fire in the background as contrasted with a hardwood stand resulting from fire exclusion in the foreground



Participants in the FRCC southeast region Fire Regime Condition Class reference condition workshop use computer modeling techniques (VDDT – the vegetation dynamics development tool) to attempt to quantify structure and composition of historic vegetation communities